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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,776	12/13/2001	Paul L. Master	021202-001000US	6960

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EXAMINER

KIM, KENNETH S

ART UNIT PAPER NUMBER

2111

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,776

Applicant(s)

MASTER ET AL.

Examiner

Kenneth S KIM

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

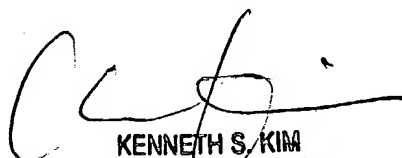
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


KENNETH S. KIM
PRIMARY EXAMINER

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2111

1. Claims 1-11 are presented for examination.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claims 9 and 11, it is not clear what is meant by "an iterative register",

(b) Claim 10, it is not clear what is meant by "the FSM and *iterative register are operated concurrently*".

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Renard et al, U.S. Patent Application Publication No. 2002/0083305.

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Renard et al teaches the invention as claimed in claim 1 including a digital processor responsive to a microinstruction (100) to perform an operation, the digital processor comprising:

- (a) a memory (330, 360, or general purpose registers not shown but well known) for storing data associated with the operation to be performed (par. 22, line 2),
- (b) a finite state machine (350) for performing a function in association with the operation (par. 23, lines 1-4),
- (c) control circuitry for providing data to the register and for starting execution of the FSM in response to the microinstruction (376; par. 18, line 15), and

further teaches as in claims 2-8,

- (d) loop control circuitry for repetitively accessing data stored in the memory (par. 19, line 5) – claim 2,
- (e) ID detection circuitry (376) for determining that at least a portion of a microinstruction is to be implemented by the FSM (par. 13, line 6) – claim 3,
- (f) a plurality of FSMs and control circuitry to selectively invoke operation in one or more of the plurality of FSMs (providing multiple units and selectively controlling is well known in the art) – claim 4,
- (g) a configurable FSM and control circuitry to configure the FSM for a predetermined function associated with the microinstruction (configuring FSM for a particular function is well known) – claim 5,
- (h) wherein the memory includes a register, a micro-store, or a cache (well known) – claims 6-8.

The processor claims 9 and 10 and the method claim 11 are equivalently rejected based on the same reason.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Scales, III et al taught a method of using state machine to process a vector data operation.

Backlund et al taught a method of using FSM to perform multiple operations for a primitive command received once.

Kloth et al taught a method of configuring an FSM.

Malek et al taught a method of using a plurality of FSMs and a micro-code store.

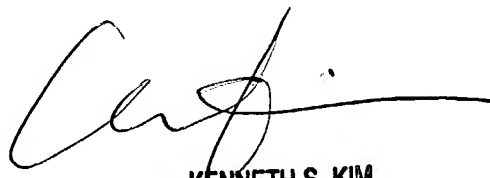
Wagner taught a method of using a micro-code controlled FSM.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth S KIM whose telephone number is (703) 305-9693. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

May 7, 2004



KENNETH S. KIM
PRIMARY EXAMINER

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